

The Green Mountain Farmer.

W H Matthews 1787

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Board Meeting in Peacham.

Last Thursday, February 1, taking our traveling companion, the editorial carpet-bag, in hand, we went down to the train, where we found the board in full force on the platform, enjoying the breath of spring as it came on the wings of our "January thaw." From this place to Barnet station, some nine or ten miles, the ride was very pleasant. At Barnet stages were waiting for that seven miles' ride up over the hills and valleys to Peacham, and a more keen, jolly, good-humored, wide-awake load you would go far and search long to find. Perhaps the fact that we were not in the regular coach but in one improvised for the occasion which had a modest young man for driver who left us to do the talking, had something to do with our grave and dignified vivacity. Every inviting farmhouse was noticed, and there were many; weather vane which they tooled resembled anything in heaven or earth, were commented on, jokes and bits of wisdom were thrown back and forth in promiscuous confusion till Peacham's lovely heights were reached, where generous hearty hosts were waiting to take us to their hospitable homes. Even the stage driver entered into the spirit of the occasion and carried us for half-price. Seldom have we enjoyed a more pleasant winter ride in a more thrifty and inviting town in Vermont. No old, run down buildings with gears swinging on one hinge, and half-faded cattle sunning themselves on the north side of rickety barns were seen, but everything was neat, orderly and indicative of thrift.

At two o'clock, the hour appointed, we went to the hall in the basement of the congregational church, where one of the most intelligent, earnest, well-dressed and well-behaved audiences, which we have ever seen in any other state, gathered. With L. N. Watts as moderator, an opening address of welcome was delivered by Prof. C. A. Barker of the academy, who spoke of the importance of such gatherings as this in which the theoretical in agriculture—as represented by the board—comes face to face with practical agriculture as represented by the farmers themselves. He emphasized the value of these face to face discussions. He also showed that the means for the proper presentation of the theoretical side of agriculture to the farmers who have neither the ability nor the means of doing it. It was a capital point, and if any who oppose the board could have heard Prof. Barker, they would have seen the need of such a work as the board is performing. He also spoke of the reaction of the western fever on so many of our young men, as it had resulted in destroying the economical equilibrium of the country. These sons of New England have crowded out those of less skill and talent, and this latter class have become our tramps, the social nuisance of the day. Altogether it was a very fine address.

Jonathan Lawrence, our neighbor of Passumpsic and the "original granger" of New Hampshire, read an excellent paper on "Grain Raising in Vermont; shall it be abandoned?" which we hope to publish. The discussion was very animated, with a strong leaning towards the growth of more grain than at present. It also came out that the Peacham farmers had pretty clear ideas of successful farming, and most of them know how to raise their own wheat and not depend on "barrel flour."

Hiram A. Cutting, A. M., of Lunenburg, gave a paper on the "Rain-fall in Vermont." The rain-fall decreases as we go north, though the number of rainy days is greater. In Europe the rain-fall averages 30 inches per annum, while in Vermont it is about 40 inches. In Orleans county it is 41; about 40 in the north. In the central part of the state it is 39, while in Burlington and south along the lake it is hardly over 38 inches. By rain-fall he meant snow and rain together. Cutting off forests has had a very important influence on the rain-fall, so that the storms are more irregular and severe at times. The old conditions of the Indian summer, that season of fair beautiful weather, no longer exists, as the area of leaves holding the moisture down to the earth by the dry autumn foliage has been sadly curtailed, and now we are as liable to storms in this as at any other season. He gave full and elaborate bases on which the weather probabilities may be predicted. The chickweed is one of the best weather indicators. If it is closed in the morning and remains so, a storm may be expected; if it is open, fall and remains thus some days, a long time of fair weather may be expected. His explanation of the signal service bureau operations showed how valuable a service it has rendered to the agricultural and commercial interests of the country.

THURSDAY EVENING.
The house was well filled at the appointed hour and there was a spirit of enthusiasm which was very gratifying to behold and very inspiring to a speaker. Prof. Noah Cresney spoke on Veterinary Science. The great majority of lameness in horses belongs to either legs or feet. If a horse steps short and carefully, the difficulty is from inflammation of the shuttle bone. The middle finger fairly represents the foot of the horse; the knee corresponds to the human wrist. The human hand has two sets of muscles, one to extend and the other to bend or hook up the finger, and the leg and foot of the horse is the same. When inflamed, the shuttle-bone is dry and irritates the muscles as they move over it hence the horse bends up his leg and stands on his toe. The only remedy is prolonged rest, and this should be either in a moist pasture or in a stable where the stall is well bedded with moist earth several inches in depth, so that the horse can rest his foot without straining the inflamed parts. Another disease is where a horse steps along and rests on his heel with the toe up. This is found in the feet, or inflammation of the laminae, that sensitive portion of the foot which is corrugated folds between the internal bone and external shell or hoof. This disease is caused by putting up the horse, after hard driving and heating, giving it grain and other food without proper rubbing and blanketing, and this

neglect leaves the legs to cool quickly, contracts the blood vessels of the legs so that the blood with which the feet are gorged cannot get back to the body where it belongs. In this state inflammation ensues, and if not speedily cured effusion takes place in the laminae, which in time may become foot matter or pus, and work itself out near the hoof, or it may break through the sole, and this founder the horse should be taken into a warm room and with acetone or other remedies be given "a sweat." If effusion has taken place, as the swollen, rounded appearance of the under surface of the foot will show, take a flax seed and make an opening into the toe as far as you can, and pour in a split foot like that of an ox, and saw just through the shell or hoof and the watery effusion will escape and the foot may be healed. A founder horse should be at the time of age, but let her go farrow the third year, and she will not only be more profitable that year, but ever afterwards, as the farrow year fully relieves the vessels for lactation purposes. He approved of the stable, clean, full care, etc. He would also have a good crop of fodder corn, Evergreen he has regarded as best; others say the Sanford is best, sown in drills. Lane's sugar beets for roots are most easily raised and very productive; sow the last of June in drills thirty inches apart, sows by hand and be sure to keep down the weeds. The plants should stand about a foot apart. Uses ashes heavily as he found, by a journey across the western plain that they could raise beets from these alkali plains, and did for a few years to exhaust the soil. He has been successful in his seed one inch deep; in winter he feeds a peck of a day of beets to his cow; Samuel Evans of Cornwall raises the seed. Mr. Chapman raises the seed German turnip, and uses phosphates on this crop; Gregory of Marlboro has good seed; raises turnips on his poorer land; he is not satisfied unless he gets 800 bushels of turnips and 1200 bushels of beets to the acre; he would use 300 pounds of phosphate per acre for turnips; uses Cumberland phosphates, as he has found it more uniformly reliable than the Bradley brand. Mr. Chapman said, in reply to a question, that the board had appointed Prof. Peter Collier of Burlington, the well known professor of chemistry in the University of Vermont, the chemist of the board, and the board invites all the farmers of the state to send samples of the fertilizers offered for sale in the several localities of the state to him for analysis; send fresh, not last year's, and not less than two pounds. Of course such a measure will have a tendency to make the manufacturers send a better article.

Mr. N. K. Abbott of East Cabot read a brief and interesting paper on "Disadvantages of Farming." He thought the light and shade was more than thought in farming than in anything else; the farmer is called upon to know so many and diverse things all at the same time; one class of disadvantages pertain to the person's own life, his ignorance or shiftness, and his family need he cannot make or raise his stock cheap; he also misrepresents the greatest success in life is amassing wealth, the neglect of the culture of his children, as well as his own. Then there are disadvantages which belong to the farmers as a class; for instance, many things which he and his family need he cannot make or raise, and he is often imposed upon by poor and shoddy material; then the school book disadvantage is another thing; then the credit system is such that the man who pays ready cash the last debt of the merchant is not to be compared; then there are too many middlemen, especially on the butter; then he grouped into a class deserving most thorough reprobation the "tree," the "sawing machine," the "hook," the "lift," and sundry other agents, and urged the necessity of a more direct trade by complete neglect of the whole class. The discussion was very spirited, special stress being given to the pros and cons on the "middlemen."

Mr. Varnum made from two cows in 1875, 640 lbs. milk, besides what was used in a family of seven persons. Mr. Miller of Burlington reported a full blooded Jersey from which he made in first week of June, 1875, 21 lbs. first week of September 17 lbs. Beside he has used feed composed of three parts of coarse middlings, mixed with one part of corn, and a good deal of timothy hay, and full twice each day. Anna Scott of Craftsbury has made since January 1, 1875, 174 lbs. milk in 1875, 450 lbs. He feeds early cut hay. Mr. Greenbanks made from eight native cows some 2400 lbs.

FRIDAY EVENING.
The exercises opened, after singing by the choir, with an address by Ora Paul of Pomfret, on "Recent Legislation Affecting Agriculture." First he called attention to that concerning cruelty to animals which he highly commended. That respecting the protection of fish and game he did not think would produce much good for the state, though he did not claim to be fully competent to judge of the matter; the dog law he explained at length, and told how the bill came to be reported favorably by the committee; the great feature in its favor is that which creates a fund out of the taxes, for the remuneration of losses caused by dogs and he highly commended the law. He then asked what success farmers had on legislation. Of the 238 members of the house 135 were farmers, while no other profession. Their cream rises quick, but for all this, this large number of farmers was practically controlled by two or three men, and they were thrown away and eight dry rennets put in their place in number two. The same is done from number two to number one, so that we have a jar of solution of constant strength—a solution of which one pint or a pint and a half is used to coagulate a thousand pounds of milk. The rennets will average from three hundred to four hundred pounds of cheese each.

The first thing a cheese maker must know at the commencement of the dairy season, and it must be settled by the managers or directors of the association, is this: Are the cheese to be sold every month, every three or six months, or kept through the season and sold the next spring? There must be no uncertainty about this. There is no man or woman endowed with the miraculous gift, or who has acquired that perfect experience, that can make a cheese that will ripen and be fit to eat at one month old, and have the same satisfaction at six months old. This is one reason why we find so much poor June and July cheese in the fall. And the cheese-maker is blamed. The cheese at one time was perfect, and should have been sent to market, but the price was down and we must hold for a rise; having done so our cheese has deteriorated and the rise is out of pocket. This kind of cheese in the ver-

FRIDAY AFTERNOON.

The size of the audience was such as to render it necessary to go to a larger room than the two hall, and hence we went to the spacious, tasteful Congregational church. The room was well filled at the appointed hour and there was a spirit of enthusiasm which was very gratifying to behold and very inspiring to a speaker. Prof. Noah Cresney spoke on Veterinary Science. The great majority of lameness in horses belongs to either legs or feet. If a horse steps short and carefully, the difficulty is from inflammation of the shuttle bone. The middle finger fairly represents the foot of the horse; the knee corresponds to the human wrist. The human hand has two sets of muscles, one to extend and the other to bend or hook up the finger, and the leg and foot of the horse is the same. When inflamed, the shuttle-bone is dry and irritates the muscles as they move over it hence the horse bends up his leg and stands on his toe. The only remedy is prolonged rest, and this should be either in a moist pasture or in a stable where the stall is well bedded with moist earth several inches in depth, so that the horse can rest his foot without straining the inflamed parts. Another disease is where a horse steps along and rests on his heel with the toe up. This is found in the feet, or inflammation of the laminae, that sensitive portion of the foot which is corrugated folds between the internal bone and external shell or hoof. This disease is caused by putting up the horse, after hard driving and heating, giving it grain and other food without proper rubbing and blanketing, and this

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the water beneath the vat and the mass of whey and curd is the same. The curd is again allowed to subside and the vat covered to retain as much heat as possible. Now the best implement in a cheese factory to assist in the production of a perfect cheese is a curd mill. The poorest one is a sink for the draining of the curd. I do not wish to be understood that the finest cheese cannot be made with the use of the sink, but I believe more fine cheese is made in factories where the curd is ground in a mill, than in those where the curd sink is in use, other things being equal. In the use of the curd mill the whey can be run from the vat as soon as the curd has obtained sufficient firmness with regard to the development of acid, the curd packed on the sides of the vat and allowed to attain just the state we wish. By this process we get a separation of the whey from the curd with less handling. The tendency of the curd after it is separated from the whey is to run together and form a solid mass. In the sink it requires constant handling to prevent this so that after the draining the salt and curd may be intimately combined. The use of the sink necessitates the holding of the curd in the whey until the whey changes or enough acidity is developed for the purpose. Often in the summer months this change comes so quick that the cheese-maker is obliged to use the utmost haste in getting the curd from the vat to the sink, and consequently rough handling ensuing great waste. The aim of the maker through out the process should be to have the whey clear and free from butter. White whey is a good thing for swine but a loss to the cheese. In this process the curd after draining from twenty to thirty minutes, is cut in squares eight or ten inches wide and packed two and two, the upper surfaces together. After draining another half hour or until the surplus whey has run off, the curd is cut in strips two or three inches in width and thrown to one side of the vat where it remains until the change is detected by the taste or smell. It is then ground, salted, and put to press. From one and one-half to two pounds of factory filled salt is used to one thousand pounds of milk, according to the dryness of the curd and the time the cheese is to remain upon the racks. The bandage is applied when the curd is put in the hoops. After the cheese has been in press one hour the followers are removed and the upper edge of the bandage is pulled up and spread evenly over the edge of the cheese. They are then returned to the press where they remain until the next morning. Whilst upon the racks they are turned and oiled every day until cured. Pure, sweet lard is used for that purpose and after two or three applications but very little is required to keep them bright and clean.

I have a few words I wish to say in favor of that much abused commodity made from pure skimmed milk, milk that has been relieved from that troublesome constituent, butter. The popular idea of skimmed cheese is that they are closely related to the family of grinders and are of nearly the same value as an article of food. With regard to some specimens that find their way to market I fully coincide with this opinion. But skimmed cheese can be made that will bring as high a price in market as many kinds of new whole milk cheese and give as good satisfaction to the consumer. If we make this kind of cheese to suit the palate of the purchaser, and convince him of the intrinsic value of its nutritive qualities, we shall be in a fair way to overcome the prejudice against it. Milk as an article of food has been used by man from the infancy of the race. We find by analysis that its constituent parts are water, that makes it refreshing as a beverage, casein, a flesh forming substance, fat or butter, a heat producing substance, sugar and mineral matter to give it sweetness and flavor. Let us compare skimmed milk cheese with pure milk, whole milk cheese and beef. These articles in a dried state according to Prof. Johnston contain in 100 parts as follows:

Ingredients.	Milk.	Whole Milk Cheese.	Skimmed Milk Cheese.	Beef.
Casein.....	33	33	33	33
Fat.....	4	4	4	4
Sugar.....	4	4	4	4
Mineral Matter.....	4	4	4	4
Water.....	70	70	70	70

Cheese Making.

A Paper Read at the Recent Meeting of the Vermont Dairymen's Association in Burlington, by E. A. Green, M. D., of Middlebury.

The care of milk, and the making of butter and cheese, is the main subject of interest to every dairymen. It has been talked and written about at every dairymen's association, and more or less at every farmers club, and it seems that nothing new can be said upon the subject. There is a right way for the dairymen to get his milk, or the product from it into the most money, and that is what every one is striving to do. What little I have to say will be upon the making of cheese. And whether the way I shall advocate is the best way or not, I leave you to judge. It is no new way. It is as old as the factor system in America, or the cheese dairy in England.

The first thing that claims our consideration is cleanliness. It should be the aim of every dairy farmer to get his milk into the tub or vat in as perfect and pure a state as possible. To do that he must give some attention to the milking of his cows. I have seen a great many milkers that were in the habit of wetting their hands, either by milking on, or dipping the fingers into the milk, the object I suppose being to milk easy. But it looked as though they were trying to increase the specific gravity of the milk by washing all the filth from the cow's udder and their hands into it. This class of milkers is the worst to manage; if you give them to understand that the milking must be done in a cleanly manner, while your eyes are upon them it is all right, but as soon as your back is turned they are at their filthy habit again. If ever a man is justified in imitating the example of Cain in his club exercise it is under these circumstances. All dirt and filth should be removed from the cow's udder and the hands before milking. I have never seen a strainer that would remove the soluble parts of filth from the milk. The flavor is sure to be imparted to the butter or cheese, and most people dislike that kind of extract. The washing of pails, strainers, etc., is a part of the dairy work that is often done too hastily and carelessly. You set your dairy help to cleansing the utensils; your wish is to have them first rinsed with warm water to free them from the milk, then have them washed and scalded. My experience has been that if there was any boiling water about the premises it was sure to go into the pails and strainers first, thereby scalding the milk upon them and making the after washing a difficult job. Tin pails washed in this manner soon acquire a white coating upon the inner surface and are troubled more or less with sore ears. Let the water be prepared for rinsing and washing in a pail for that purpose, and let them be scalded with water at a temperature of not less than 160°. Thorough washing, scouring and boiling water is the remedy for a great deal of bad butter and cheese.

Our plan for cure, preservation and use of rennets has been to remove the curd, and place them upon turners or boards in a warm room, and dry them as soon as possible, with the use of very little salt. After being thoroughly dried the salt is shaken from them, and the rennets put into paper bags and kept a year before using. Experience has taught us that a rennet a year old will coagulate double the quantity of milk that a new one will, and will produce a firmer curd, clearer whey, and consequently better cheese. Three stone jars are used holding six or eight gallons each numbered one, two and three. Into number one eight-year-old rennets are put and the jar filled with whey that has been boiled to remove the curd and allowed to get cold before using. The rennets remain in number one six or eight days, being turned inside out and rubbed every day. They are then taken out and put in number two, which is filled as before and allowed to soak for one or two days and then are thrown away and eight dry rennets put in their place in number two. The same is done from number two to number one, so that we have a jar of solution of constant strength—a solution of which one pint or a pint and a half is used to coagulate a thousand pounds of milk. The rennets will average from three hundred to four hundred pounds of cheese each.

The first thing a cheese maker must know at the commencement of the dairy season, and it must be settled by the managers or directors of the association, is this: Are the cheese to be sold every month, every three or six months, or kept through the season and sold the next spring? There must be no uncertainty about this. There is no man or woman endowed with the miraculous gift, or who has acquired that perfect experience, that can make a cheese that will ripen and be fit to eat at one month old, and have the same satisfaction at six months old. This is one reason why we find so much poor June and July cheese in the fall. And the cheese-maker is blamed. The cheese at one time was perfect, and should have been sent to market, but the price was down and we must hold for a rise; having done so our cheese has deteriorated and the rise is out of pocket. This kind of cheese in the ver-

the water beneath the vat and the mass of whey and curd is the same. The curd is again allowed to subside and the vat covered to retain as much heat as possible. Now the best implement in a cheese factory to assist in the production of a perfect cheese is a curd mill. The poorest one is a sink for the draining of the curd. I do not wish to be understood that the finest cheese cannot be made with the use of the sink, but I believe more fine cheese is made in factories where the curd is ground in a mill, than in those where the curd sink is in use, other things being equal. In the use of the curd mill the whey can be run from the vat as soon as the curd has obtained sufficient firmness with regard to the development of acid, the curd packed on the sides of the vat and allowed to attain just the state we wish. By this process we get a separation of the whey from the curd with less handling. The tendency of the curd after it is separated from the whey is to run together and form a solid mass. In the sink it requires constant handling to prevent this so that after the draining the salt and curd may be intimately combined. The use of the sink necessitates the holding of the curd in the whey until the whey changes or enough acidity is developed for the purpose. Often in the summer months this change comes so quick that the cheese-maker is obliged to use the utmost haste in getting the curd from the vat to the sink, and consequently rough handling ensuing great waste. The aim of the maker through out the process should be to have the whey clear and free from butter. White whey is a good thing for swine but a loss to the cheese. In this process the curd after draining from twenty to thirty minutes, is cut in squares eight or ten inches wide and packed two and two, the upper surfaces together. After draining another half hour or until the surplus whey has run off, the curd is cut in strips two or three inches in width and thrown to one side of the vat where it remains until the change is detected by the taste or smell. It is then ground, salted, and put to press. From one and one-half to two pounds of factory filled salt is used to one thousand pounds of milk, according to the dryness of the curd and the time the cheese is to remain upon the racks. The bandage is applied when the curd is put in the hoops. After the cheese has been in press one hour the followers are removed and the upper edge of the bandage is pulled up and spread evenly over the edge of the cheese. They are then returned to the press where they remain until the next